REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed August 5, 2005. In the Office Action, the Examiner notes that claims 28-54 are pending and rejected.

In view of the following discussion, Applicant submits that none of the claims now pending in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and §103.

It is to be understood that Applicant does not acquiesce to the Examiner's characterizations of the art of record or to Applicant's subject matter recited in the pending claims. Further, Applicant is not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant response.

REJECTIONS

35 U.S.C. §102

Claims 28, 29, 35, 37, 38, 41, 42, 48, 50 and 54

The Examiner has rejected claims 28, 29, 35, 37, 38, 41, 42, 48, 50 and 54 under 35 U.S.C. §102(b) as being anticipated by PCT Publication No. WO 97/31458 to Wicki et al. (hereinafter "Wicki").

In general, Wicki teaches a system for dynamically determining a network topology. As taught in Wicki, a source node generates a ping frame. The source node transmits the ping frame to a first router coupled to the source node. The first router identifies the frame as a ping frame. In response to the ping frame, the first router creates a corresponding echo frame. The first router transmits the echo frame to the source node. The source node modifies network route information using the information included in the body portion of the echo frame. (Wicki, Pg. 11).

Wicki, however, fails to teach or suggest each and every element of Applicant's invention of at least claim 28. Namely, Wicki fails to teach or suggest at least the limitations of a "first port identification message including information

regarding at least said at least one originally transmitting network device's perception of the successive network device's network links," "said second port identification message including information regarding at least said successive network device's perception of its own network links," "comparing said at least one originally transmitting network device's perception of the successive network device's network links with said successive network device's perception of it's own network links," and "updating, if said at least one originally transmitting network device's perception of the successive network device's perception of its own network links does not agree with said successive network device's perception of its own network links, said at least one originally transmitting network device's perception of the successive network device's network links to agree with said successive network device's perceptions of its own network links," as taught in Applicant's invention of at least claim 28. Specifically, Applicant's claim 28 positively recites:

> "28. A telecommunications network, comprising:
> at least two network devices, each of said network devices comprising at least one network port;
> at least one communications path interconnecting the network ports of each of said at least two network devices, each combination of communications path and interconnected network ports forming a network link; and
> at least one controller in communication with said at least two network devices, said at least one controller configured to perform the steps of:
> detecting a network modification within said telecommunications network;
> causing at least one of said network devices to transmit a first port identification message to a successive network device in said communications path, said first port identification message including information regarding at least said at least one originally transmitting network device's perception of the successive network device's network links;
> receiving a second port identification message from said successive network device, said second port identification message including information regarding at least said successive network device's perception of its own network links;

comparing said at least one originally transmitting network device's perception of the successive network device's network links with said successive network device's perception of its own network links; and

updating, if said at least one originally transmitting network device's perception of the successive network device's network links does not agree with said successive network device's perception of its own network links, said at least one originally transmitting network device's perception of the successive network device's network links to agree with said successive network device's perception of its own network links."

(Emphasis added.)

In the Office Action, the Examiner asserts that the ping frame of Wicki teaches Applicant's first port identification message. Specifically, the Examiner asserts that the ping frame of Wicki teaches Applicant's limitation of "to transmit a first port identification message to a successive network device in said communications path, said first port identification message including information regarding at least said at least one originally transmitting network device's perception of the successive network device's network links," as taught in Applicant's invention of at least claim 28. (Office Action, Pg. 3). The Applicant respectfully disagrees.

As taught in Wicki, the ping frame merely includes a ping frame header and a ping frame body. The ping frame header includes routing information (i.e., information identifying the source node that created the ping frame) and a ping frame identification code (i.e., a code identifying the frame as a ping frame, as opposed to an echo frame or other frame type). The ping frame body includes information used by the first router for transmitting the echo frame back to the source node from which the associated ping frame was received. In particular, with respect to the ping frame body, Wicki teaches that "source node 102A generates 606 a frame body 906A that includes routing information for the echo frame...." (Wicki, Pg. 11, Lines 1-2).

As such, the ping frame information taught in Wicki is simply not information regarding the source node's perception of the first router's network links. Specifically, the ping frame header information identifying the source node that created the ping frame, and the frame type, provides no link information

whatsoever, much less network link perception information, as taught in Applicant's invention of at least claim 28. Similarly, the ping frame body routing information used by the first router for transmitting an echo frame back to the source node fails to provide any network link information whatsoever, much less network link perception information, as taught in Applicant's invention of at least claim 28.

In other words, as taught in Wicki, the ping frame transmitted from the source node to the first router merely triggers the first router to create and transmit an associated echo frame, and provides information that enables the first router to determine the source node to which the associated echo frame should be transmitted. As such, Wicki is completely devoid of any teaching or suggestion of transmitting a first port identification message to a successive network device in a communications path, where the first port identification message includes information regarding the at least one originally transmitting network device's perception of the successive network device's network links," as taught in Applicant's invention of at least claim 28.

In the Office Action, the Examiner asserts that the echo frame of Wicki teaches Applicant's second port identification message. Specifically, the Examiner asserts that the echo frame of Wicki teaches Applicant's limitation of "receiving a second port identification message from said successive network device, said second port identification message including information regarding at least said successive network device's perception of its own network links," as taught in Applicant's invention of at least claim 28. (Office Action, Pg. 4). The Applicant respectfully disagrees.

As taught in Wicki, the echo frame merely includes an echo frame header and an echo frame body. The echo frame header includes the source node port from which the associated ping frame was received and an indicator which designates the frame as an echo frame. A port identifier, as taught in Wicki, is simply not information regarding a node's perception of its own network links, as taught in Applicant's invention of at least claim 28. Similarly, a frame type

indicator, as taught in Wicki, is simply not information regarding a node's perception of its own network links, as taught in Applicant's invention of at least claim 28. As such, the echo frame header simply does not include any network link information, much less information regarding the first router's perception of its own network links.

Furthermore, as taught in Wicki, the echo frame body includes "the router identification code, e.g., 20, the receiving port identifier, e.g., port 3, and the connectivity information." (Wicki, Pg. 11, Lines 38-39. The router identification code and receiving port identifier of Wicki clearly do not constitute network link information, much less information regarding the first router's perception of its own network links. Furthermore, although the echo frame body includes connectivity information, as taught in Wicki, the connectivity information merely "identifies the status of each port." (Wicki, Pg. 11, Lines 25). In other words, the connectivity information included in the echo frame of Wicki merely provides port status information. The port status information included in the echo frame of Wicki is simply not a message including information regarding a node's perception of its own network links, as taught in Applicant's invention of at least claim 28.

Furthermore, in the Office Action, the Examiner asserts that Applicant's step of "comparing said at least one originally transmitting network device's perception of the successive network device's network links with said successive network device's perception of its own network links" is inherently taught by Wicki because the comparing step is required for performing the subsequent update step of Applicant's invention of claim 28. (Office Action, Pg. 4). The Applicant respectfully disagrees.

First, the Examiner has failed to cite any portion of Wicki explicitly teaching a step of comparing an originally transmitting network device's perception of a successive network device's network links with the successive network device's perception of its own network links. As described hereinabove, Wicki is completely devoid of any teaching or suggestion of information regarding

any node's perception of another nodes network links, or that other node's perception of its own network links. In fact, Wicki is completely devoid of any teaching or suggest of any network link information whatsoever, much less network link perception information. Thus, Wicki simply cannot teach "comparing said at least one originally transmitting network device's perception of the successive network device's network links with said successive network device's perception of its own network links," as taught in Applicant's invention of at least claim 28.

Furthermore, Wicki does not inherently teach Applicant's invention as recited in claim 28 since the teachings of Wicki do not necessarily include comparing at least one originally transmitting network device's perception of a successive network device's network links with the successive network device's perception of its own network links. For a missing element to be inherent, "extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 49USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (internal quotations omitted) (emphasis added).

While the Examiner stated that the comparing step is inherently required for the updating step, the Examiner did not provide any evidence of a comparison step as taught in Applicant's invention of at least claim 28. The ping frame of Wicki merely includes routing information for routing the ping frame from a source node to a first router and for routing the echo frame from the first router back to the source node. The echo frame of Wicki merely includes routing information (for routing the echo frame from the first router to the source node) and port status information. As such, the only information that could possibly be compared in the Wicki arrangement would be routing information of the ping and echo frames, not network link perception information as taught in Applicant's invention of at least claim 1.

As such, although a comparison of routing information may be performed in the Wicki arrangement, the Examiner's inherency argument deals in probabilities and possibilities, which are insufficient to establish such inherency. Robertson, 49 USPQ2d at 1950. Furthermore, even assuming such a comparison of routing information between the ping frame and the echo frame of Wicki was inherently taught in Wicki (which Applicant maintains it is not), such a comparison would still fail to teach or suggest comparing a step of comparing an originally transmitting network device's perception of a successive network device's network links with the successive network device's perception of its own network links, as taught in Applicant's invention of at least claim 28. As such, Wicki fails to explicitly or even inherently teach or suggest at least the limitation of "comparing said at least one originally transmitting network device's perception of the successive network device's network links with said successive network device's perception of its own network links," as taught in Applicant's invention of at least claim 28.

In the Office Action, the Examiner asserts that Wicki teaches Applicant's limitation of "updating, if said at least one originally transmitting network device's perception of the successive network device's network links does not agree with said successive network device's perception of its own network links, said at least one originally transmitting network device's perception of the successive network device's network links to agree with said successive network device's perception of its own network links," as taught in Applicant's invention of at least claim 28. (Office Action, Pg. 3). The Applicant respectfully disagrees.

As described hereinabove, Wicki is completely devoid of any teaching or suggestion of information regarding one node's perception of another node's network links or information regarding the other node's perceptions of its own links. As such, Wicki must be completely devoid of any teaching or suggestion of updating the one node's perception of the other node's network links to agree with the other node's perception of its own network links, as taught in Applicant's invention of at least claim 28. Although Wicki teaches updating network routing

information, the network routing information updated merely comprise updates to routing tables according to the port status information included in the echo frame. As taught in Wicki, the routing table entries include routes through the network. The routing table entries updated in the Wicki arrangement have absolutely nothing to do with updating one node's perception of the other node's network links to agree with the other node's perception of its own network links, as taught in Applicant's invention of at least claim 28.

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). The PCT Publication (Wicki) fails to disclose each and every element of the claimed invention, as arranged in the claim.

Accordingly, Applicant respectfully submits that independent claim 28 is not anticipated and fully satisfies the requirements of 35 U.S.C. §102 and is patentable thereunder. Furthermore, independent claim 48 recites features similar to the features of independent claim 28. As such, for at least the same reasons as discussed above with respect to independent claim 28, Applicant respectfully submits that independent claim 48 is also not anticipated and fully satisfies the requirements of 35 U.S.C. §102 and is patentable thereunder.

Accordingly, Applicant submits that independent claims 28 and 48 are not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Furthermore, claims 29, 35, 37, 38, 41, 42, 50 and 54 depend, either directly or indirectly, from independent claims 28 and 48 and recite additional limitations therefor. As such, and for at least the same reasons as discussed above, Applicant submits that these dependent claims are also not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. Therefore, Applicant respectfully requests that the Examiner's rejection be withdrawn.

35 U.S.C. §103

Claims 30-34, 36 and 51

The Examiner has rejected claims 30-34, 36 and 51 under 35 U.S.C. §103(a) as being unpatentable over Wicki. Applicant respectfully traverses the rejection.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 USPQ 1021, 1024 (Fed. Cir. 1984) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 USPQ 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The Wicki fails to teach or suggest Applicant's invention as a whole.

As discussed hereinabove, Wicki fails to teach or suggest each and every element of Applicant's invention of at least independent claims 28 and 48. As such, independent claims 28 and 48 are not anticipated and fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder. As such, Applicant submits that independent claims 28 and 48, and dependent claims 30-34, 36 and 51 which depend directly or indirectly from independent claims 28 and 48, are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicant respectfully requests that the Examiner's rejection be withdrawn.

ALLOWABLE SUBJECT MATTER

The Examiner has objected to claims 39, 40, 43-47, and 52-53 as being dependent upon a rejected base claim and indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for indicating the allowable subject matter with respect to these claims. However, in

view of the arguments set forth herein, Applicant believes that amended base claims 28 and 48 (and all intervening claims) are in allowable form and, as such, dependent claims 39, 40, 43-47, and 52-53, as they stand now, are therefore in allowable condition. Therefore, Applicant respectfully requests foregoing objections to claims 39, 40, 43-47 and 52-53 be withdrawn.

CONCLUSION

Thus, Applicant submits that none of the claims presently in the application are anticipated or obvious under the respective provisions of 35 U.S.C. §102 and §103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Michael Bentley at (732) 383-1434 or Mr. Eamon J. Wall at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Dated: 11/3/05

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